

## ABSTRACT

A method and apparatus for detecting a high fly write condition in a disk drive is disclosed. Amplitudes of automatic gain control (AGC) fields are used in connection with determining whether a high fly write condition exists in a disk drive, since the amplitude of an AGC field read by a head is generally related to the flying height of the head. In one embodiment, a calibration process is performed to obtain average amplitudes of AGC fields on a zone-by-zone basis for a head associated with a disk surface. These average amplitudes of AGC fields are then stored onto the disk surface for later use. When a write operation is to be performed, the head measures the amplitude of the AGC field associated with a data sector onto which a block of data is to be stored. The measured amplitude of the AGC field is compared to the average amplitude of the AGC fields for the zone associated with the AGC field being read. If the difference between the measured amplitude of the AGC field and the average amplitude for the AGC fields for the zone is outside of a certain tolerance, a high fly write condition may exist. Accordingly, data written during a high fly write condition may be rewritten when the flying height has returned to normal or some other remedial action may be taken.